TOMATO CULTURE

By W. A. VAN CAMP
INDIANAPOLIS, IND.

Livingston's Stone Tomato

Has again scored big triumphs over all competitors the past season. From leading canning centers of Ohio, Indiana, Maryland, Delaware, New Jersey, etc., comes the news that the old reliable Livingston's Stone is still the most dependable of all large bright red sorts for canners' use. For many years it has been

The "Stand-by" of the Canners

For perfect production of highest grade tomato seed, Ohio is the Ideal state. With us originated the most profitable sort of tomatoes ever introduced. Livingston's Paragon, Livingston's Favorite, Livingston's Coreless and Livingston's Hummer are a few of the sorts that have helped the canning industry to make better products and bigger profits. To-day our sales are measured by **Tons of Seeds.**

Livingston's Tomato Seeds are sold in sealed packages only.
Quotations and Seed Annual on Request.

The Livingston Seed Co.

COLUMBUS, OHIO

Tomato Cultivation

A PRACTICAL TREATISE ON THE
GROWING AND CULTIVATION
OF THE TOMATO

By WILL A. VAN CAMP

INDIANAPOLIS, INDIANA

TOMATO CULTIVATION

Every year a new series of cultivators, both of farm and garden, springs into existence. If these young men could be persuaded to take up the work from the scientific standpoint, agriculture could soon be elevated to an art. Instead of meeting the same difficulties as their fathers, they could benefit themselves and their State by profiting by the experiences of their predecessors. To these progressive minds who are interested in the successful cultivation of the tomato, we submit the following suggestions of work, based upon the most careful observation and experience.

First Tomato

The first tomato was the small Red Cherry. The next one was the Golden Trophy, a very large, rough variety. The next kind was Mr. Warner's Red Trophy,

which, for a while, sold for a very high price, and at one time brought as much as ten cents for one seed.

It would be impossible to follow up the constant improvement of the tomato and its rapid progress in all parts of the country as a staple food, in this brief history of the plant; so we will pass on.

Soil for Tomatoes

One of the most important factors in securing an assured crop of tomatoes is the procuring of good soil.

It is quite true that success in growing tomatoes has been had in almost all kinds of soil. To be on the safe side, however, care should be taken in selecting the soil to be used. A clay loam, well drained, will produce, as a rule, a large crop of very solid tomatoes. In some districts last season, where a rich, sandy loam was used, a very large yield was obtained. However, the best tomatoes are those grown in a moderately rich clay soil with a good porous clay sub-soil, but the land should not be made too rich, for this con-

dition will induce too much growth of vine, cause blight and rot, and the vine will not be so prolific in fruit.

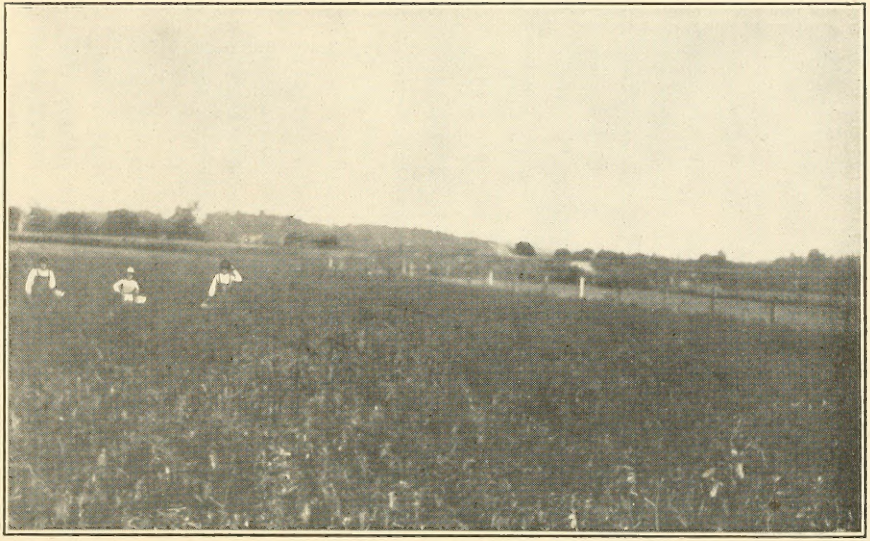
Drainage

The soil used for the tomato crop should be well drained either by nature or atificial means. The first two weeks after the plant is set in the field is the time when the plant cannot stand much water. Care must be taken that young plants do not have "wet feet."

Planting and Making Beds

Use common out-door hot beds. Nearly all farmers understand the making of these, yet it is well to mention a few points about preparing them for tomatoes. For each acre of tomatoes, provide a hot bed 6′ x 10′. These hots beds should be made during the last week in March or the first week in April.

The deep beds are far the best; and those with heating material placed under the ground are much better than the beds which are above the ground, for those under hold the heat much longer.



This field of Tomatoes was grown on very rich black soil. The foliage was so heavy that the Tomatoes could not secure sunlight, hence, they rotted before ripening.

This heat is an essential for the tomatoes. A deep bed not only retains the heat longer, after the bed is once thoroughly heated, but is more uniform throughout.

Making Hot Beds

Use boards 18″ wide for the sides and ends. Excavate 8″, using the soil to bank up the sides and ends; this will prevent water from seeping into the excavation and cooling the bed.

One should use not less than 12 inches of fresh stable manure well trodden down and elevated only a few inches above the surface. The next important item is to have plenty of good, rich dirt, using not less than 5 inches, and laying it on as soon as the bed is formed. Then put on the cover—glass preferred—close tightly and let it remain so until the bed becomes thoroughly hot. A canvas cover may be used, but it is likely to admit too much air, thus allowing the bed to cool. It is sometimes a week before it is thoroughly heated. Then work the soil and sow the seeds in rows 8″ apart, using five seeds to the inch. I wish to call your attention to

pressing the soil firmly upon the seed. If you wish to transplant the plant from this bed to a cold bed, you may sow the seeds in rows 6″ apart and use eight seeds to the inch. The transplanting should be done after the plant has put out the second leaf. Transplanted plants should be set in rows 2″ apart and 2″ wide. Use an old saw blade for making the furrows in which to set the plants. See that no plant is bent, but that each is perfectly straight. This will make the plants much easier to handle.

Making Warm Beds

These beds should be made 5½′ wide and as long as one may desire. Use lumber 12″ wide and make the cover out of muslin. Drive a stake about 20″ in height at the middle point of each end. Then draw a wire from the sides across the end and another wire through the middle. This will make your roof like that of a house. You can now put the wires across at a distance of every eight feet in the same manner. This will hold the cover up well.

Fasten one side firmly and secure the other side by means of loops. This device will be very useful when you wish to give the plants sunlight. Let these beds stand three days before sowing the seed. The beds should be made as follows:

Excavate either the south or east end of the bed 1½″ lower than the other end. This will allow for drainage. Use 4″ of fresh stable manure and pack it solidly. Then cover it with 3″ of good rich soil. Top dress the bed with 1″ of very rich soil and work this well into the top of the other soil, using a small garden rake. Cover the bed and let it stand for three or four days. Then work the soil again. In sowing the seed, sow it 1″ deep, using four seeds to the inch and putting the rows 6″ apart. By means of a board press the seed solidly into the soil. This will produce even germination.

In working the plants, use a little tool made after this fashion. Take a stick and drive four eight penny nails into the end. This you will find to be the best tool you can secure for working the plants.

In taking plants out of the bed, never pull them, but first loosen the soil so that you can lift them out, breaking no roots, and with some of the soil still clinging to the plant. In case we should have any cold weather, your plants will probably need more protection than the muslin cover. A lantern is not be used on account of the danger of fire or smoke. A thin covering of straw placed over the muslin is the best protection you can obtain. The plants should have plenty of air after they reach a height of six inches. If you wish to rush them you can do it by watering them every day and by keeping them covered. The plant should be eight inches tall before you take it out of the bed to set it in the field.

Growing Plants in Cold Beds

We find that many of our growers think it is too much work to grow plants in a hot or warm bed, and hence they prefer a cold bed. The preparing of the cold bed is neglected and often poor results are obtained. Cover your plant bed with 2″ to 3″ of fresh stable manure in

the fall, then in the spring rake it off before plowing. Plow the bed 5″ to 6″ deep, then cover the bed with a good coat of well rotted manure; then rake the soil, seeing that there are no clods or uneven soil. Have it in perfect condition and quite mellow; then if you have a seed sower set it as you would to sow beet seed. Make a small furrow, then sow the seed. If you have no drill, take a tin can that has a lid, and punch the bottom full of holes like a pepper box. Use a ten-penny nail. Punch holes from the outside. This will scatter the seed in the furrow; then cover with a hoe or garden plow. Do not try to get the seed sown in a narrow row. If the seed are sown in a furrow 2″ to 3″ wide, the seed will scatter and make much better plants. Do not pull the plants, but dig them up and save all the little roots. Do not sow seed on the north side of fence or building. See that your plants get the morning sun—an east or south slope is best. The rows in a large bed should be 16″ apart, in a small bed they can be 10″ apart.

I have had the very best results in

growing plants in the open field by using 500 pounds of commercial fertilizer to the acre. I use a garden plow to make my furrows and sprinkle my fertilizer in the furrow. If you have a seed drill, you can incorporate the fertilizer with the soil by means of the drill. If not, use the plow and make the furrow a little deeper. I make the rows sixteen inches apart thus giving plenty of room for hand cultivation. I am never troubled with any fungi in this plant bed. My plants are a few days later, but are very strong and stalky.

Sowing the Seed

It is of utmost importance to know when and how to sow the seed in the beds. In hot beds, one should wait until the weed and grass seed get a good start. Then take a fine steel-tooth rake and work the soil until all young weeds and grass which have started have been destroyed, and the soil made perfectly fine. Then commence at one end of the bed to sow the seed. They should always be sown north and south across the bed in drills 6″ apart. The furrows should be from

1″ to 2″ deep. Sow the seed thinly and with the back of the hand press them firmly in the soil and cover with fine dirt. Great care must be taken not to sow the seed too thickly. Where this has been done the young plants must be thinned out at once. When the sowing of the seed is completed, take a board and press the soil firmly over the seed. This operation is of the greatest importance in order to secure quick and even germination. By using this method, you will be able to secure good, strong, healthy plants. Here lies the secret of success in tomato growing—the securing of good, strong, stalky, well-rooted plants. This is all important for shipment, as it is only from such plants that fine, early tomatoes are grown.

Then watering is a very important matter, and great care must be taken in this operation to prevent damping off. Water out of wells or springs should never be used, unless warmed. Let it rain on the beds when possible, for this is far better thn watering by hand.

As to the time of the season to sow the seed—this depends entirely upon the lo-

cality. One should always reckon to sow the seed about six weeks before the time to set in the open field. This is ample time for the plants to get all the growth needed. It is best not to begin until time to hurry the plants right along from the day they come up until they are set in open field. Plants started and dwarfed never do well.

Preparing Field for Setting of Plants

The preparation of the soil is another important factor in the proper raising of tomatoes. The ground should be prepared in the following manner:

Plow the ground as early as possible in the spring at the depth of 8", and allow to settle. The soil should be worked once a week with a disc or harrow. This will keep the ground clear of weeds or grass. A few days before setting the plants, you should perpare the soil in the same manner by using thedisc and loosening the ground to a depth of 5". Then fertilize by using a wheat drill, then disc again so as to thoroughly incorporate the fertilizer with the soil. If the soil is full

of clods, make it loose by using a good, heavy drag. If the ground is meadow, or, in fact, if it contains any kind of grass, I advise the use of the disc, together with the drag. If you do this once a week it will make you a perfect bed for your plants and will eventually prove a great saving in the cultivation.

Preparation of Plants for Field

The correct preparation of the plants is another essential to a good crop. In taking the plants out of the beds, loosen the soil so that the plant may be easily lifted out. By pulling a plant your bruise it and break off all the small roots. Moisten the roots, but not the top of the plant, as soon as you take it out of the bed.

We wish to warn the tomato growers against placing the young plants in standing water, as they are very easily scalded. Instead, we advise that they be put into a mulch of mud and water, as this keeps the plant moist and fresh until set in the field.

There are two kinds of plants which can be grown almost side by side, one

with a long tap root, the other with the roots in a cluster. I prefer the plant with a cluster of roots grown by top dressing. A plant bed that has been manured heavily, turned under, and not top dressed, will grow a plant with a long, slim tap root. If broken off, the plant will stop growing for several days and will wilt when set in the field. A plant grown with a top dressing only will grow the roots nearer the surface and the roots will be in a cluster. When the plant is set in the field, and a small amount of water is used in setting, it will not wilt down, thereby contributing toward an earlier crop.

Seasoning Plants

We often find tomato plants very tender on account of their quick growth. The cultivator sometimes has trouble in getting such plants to grow. Should your plants be of this sort, I advise that you season them. This is accomplished by taking them out of the beds and placing them in small bunches under a cover. Keep the roots moist, but not water-soaked. Allow the plants to stand from

This field of Tomatoes was grown at Wirt, Ind. The soil is a cold white clay, without drainage 200-lbs. of fertilizer was used to the acre, and it was placed around the plants and worked into the soil with the fingers. Good results were obtained.

one to three days. You will find that the plant thus nurtured will grow much better and will prove to be a strong plant.

Time for Transplanting to the Field

The plants should be transplanted not earlier than May 15th, and not later than June 15th. Some seasons we have set them out as late as July 1st, and have obtained a good crop, but this seldom happens.

Setting Plants in Open Field

The soil should be in good condition, well worked down, and fresh. Cross it out with a marker, and in furrowing it do not allow the earth to get dry before setting the plants. Keep setting the plants up close to the plow. The distance for setting plants in the field is at a space of 4′ x 4′, and it will bring good results; but on a very rich black soil they should be set 4′ x 5′ and even 5′ x 5′ is not too far apart on some land. There are many kinds of tools which may be used in setting the plants, and all are successful. My plan for hand-setting is to

use a common, flat, narrow spade. A narrow and short-handled hoe is often used with good results. A sharp, wooden peg is the poorest tool you can use. It makes a hole which you cannot close without packing the soil, and which does not shut off the air from the roots. The plant-setting machines are doing good work. If your ground is mellow, as it should be, a plant-setter is a splendid labor-saving implement.

The plants should be of good size and stalky, but not overgrown or in bloom. after taking them up they should be placed in boxes or pans in an upright position. If possible, set them out along toward night or after showers, as they recover sooner. After watching growers for several years, and also from actual experience, it has been found that when setting a plant into the field, about one-half to one pint of water should be used, pouring it on a small portion of earth that should cover the roots, and a little dry dirt should be left on top. This will exclude all air and keep the plants moist. While it takes a little longer to set out the plants

by using water, it will pay at the end of the season. The plants should be set deeply. If the above described method is closely followed, the plants will start to grow immediately.

Fertilizing

One week before setting the plants, distribute, by means of a two-horse wheat drill, over the ground, not less than 300 to 500 pounds of fertilizer to the acre. Then harrow or disc the soil in order to thoroughly mix the fertilizer with it. Next mark off the distance apart which you expect to set the plants, 4′ x 4′, 4′ x 4½′, or 5′ x 5′. In order to drill the fertilizer both ways, use a one-horse five-hole wheat drill, closing up the two outside holes, the wheel of the drill being in the mark. By this method you obtain double fertilization in the cross where you are to set the plant. Use a disc or harrow to thoroughly mix the fertilizer with the soil. Be sure to leave the marks at the ends of the field so that you can again mark the ground for the setting of the plants, the same as before. In this

way you will be able to set the plant where it should be to give it the immediate results, that is, directly in the cross where you have double fertilized.

Next plan: As soon as the plant has started to grow, scatter around the plant 1½ oz., or a large tablespoonful of fertilizer. Use care not to get any of the fertilizer on the plant, as it will injure the plant. Next. As this fertilizer must be thoroughly blended with the soil, mix the two with a hoe. You cannot obtain good results by using a plow, as you are not able to mix the two thoroughly. Consequently, in the end, you are disappointed in your crop. In a field test made last season, we obtained 1½ tons to the acre when we tried to mix the fertilizer by plowing. On the other hand, where we mixed the fertilizer with a hoe, we secured 8 tons to the acre. In both cases the same amount to the acre was used and at the same time. On ordinary soil, I believe that 300 lbs. to the acre is sufficient, but I think 500 lbs. is much better. Should you use 500 lbs., I advise that you put on 300 lbs. for the first application

and in three weeks 200 lbs. more. Mix it in the soil in the same way. On very poor soil I would put a fork of well-rotted manure in each hill, then 3″ of soil on top of the manure. In four weeks I would fertilize the same as above.

Cultivating

As soon as possible after the plants have been set in the field, they should be cultivated. This will loosen up the soil where it has been packed down during the work of transplantation and will start the young plants into growth. The first cultivation may be rather deep and close to the plants, the shovels being set to throw the dirt slightly toward them. The succeeding cultivations from seven to ten days apart should be shallow and farther away, the aim being to form a dust mulch to prevent evaporation as well as to keep down weeds.

If the weather is very dry, a small harrow is a good implement. Keep the soil well stirred, so that it will hold the moisture and not prune the roots. If the land is wet, care should be taken to have all in-

dentations between the hills smooth and level. If the weather is wet and cold, do as little work to the plant as possible until the soil gets dry enough to stir.

The cultivation itself of this crop is neglected more, on the whole, than any other operation connected with raising it. Perhaps this can be accounted for by the fact that the farmer is very busy with his other crops at this season of the year and hence leaves the tomato to shift for itself. The neglect of cultivation proves disastrous to the crop, as it allows weeds to choke out the plants, and the ground to become baked and hard, thus encouraging evaporation of the soil moisture and greatly decreasing the yield.

I wish to call your attention to the following item, as you may at some future time say that your tomatoes do not weigh out well. The green tomato is light and you lose on every one you pick. Packers cannot use a green tomato for anything. They want the ripe tomato. Remember this in your picking. Neither can they use a decayed tomato. Throw away any one which may not be ripe and sound.

The decayed tomato is useful to the farmer as a fertilizer.

When the first fruits are beginning to set on the vine, cultivation is usually discontinued. If the plants are still small, they may be cultivated once between each row, care being taken not to shake the vines, as this will cause the small fruit to drop. Plants properly cared for will usually cover a considerable portion of the ground when the fruits begin to form, thus preventing evaporation to a great extent. Throughout the remainder of the season, two or three thorough hoeings will generally be sufficient to keep the weeds under control.

The tool commonly used in caring for the crop is the two-horse corn cultivator. If the soil is dry and soft, a drag made out of the drive wheel of a mowing machine is a good implement. This will throw soil enough to the plant to cover the grass and weeds.

One of these, with several small teeth to break the soil, should be selected in preference to those having two large

shovels, which leave the soil in ridges. Level and shallow cultivation is preferable to hilling or ridging.

Harvesting

The time of harvesting depends to a great extent upon the earliness of transplanting and the weather conditions at the time the first fruits are setting. Under favorable conditions, the first picking occurs from 70 to 80 days after the plants are set in the field. This will bring the beginning of the picking season from the first of August to the first of September. The vines usually continue to bear until the first killing frost.

In picking tomatoes, handle them carefully. Pick only those that are ripe. Do not injure the vine. If, by mistake, one is taken too green, place it back on the base of the vine to ripen until the next picking. Pick all decayed tomatoes from the vines at first and either throw them away or feed them to hogs, cattle, or poultry, all of which are very fond of them. There is usually more fault found with reference to the tomato being picked too

green than with any other phase of tomato growing.

In some cases, at factories visited during the canning season, from one-fifth to one-third of the fruits in certain deliveries had to be taken out on the sorting tables because of their green condition.

Crates of tomatoes delivered to the canning factory in a dripping condition are unfit for use.

Pick at the proper time, pick carefully, and handle carefully after picking, and the crop will bring more money.

In removing the fruits, care should be taken not to move the vines any more than is positively necessary. Lifting and pulling them about greatly reduces the yields in many instances. The stems lying on the ground take root and carry considerable nourishment to the ripening fruit, and as it is the younger roots that are of the most value to the plant, it is very important that they be left intact. Not only is this food supply cut short, but many of those fruits already formed are knocked off through rough handling of the vines.

Care must be taken in placing the tomatoes in crates in order to avoid bruising them. These crates are easily handled and keep the fruit from being crushed in hauling. The canning companies usually own the crates and either rent or loan them to the growers. The crates have aided considerably in the proper handling of the crop.

Do not fill the crates too full when loading on the wagon. Set them down carefully. If they are slammed around both before and after the fruit is in the crates, it is no wonder the latter comes to the factory in bad condition. All tomatoes should be taken to factory or station in a wagon with springs.

Varieties

There are now a great many varieties of tomatoes being offered. The variety depends largely upon the use for which the crop is intended. When growing for shipping purposes, we have found the Stone to be the very best. For the last thirty-five years we have purchased the Stone variety from the Livingston Seed

Company and have found it worthy of its name, "True Blue." From a special account I find that this variety was discovered two hundred and thirteen years ago, 1700.

We also think well of the Landreth Red Rock. As they are a little earlier variety than the Stone, some people prefer them.

We have used the Landreth Red Rock only three years, but we find our growers so well pleased with the variety that they are asking for its seed. It is as early as the Favorite, is a good producer, and is a smooth, solid tomato for shipping.

Insects and Diseases

At the present time the tomato in Indiana is not troubled seriously by either insects or diseases. In some localities, during certain seasons, one or two growers may be troubled to a considerable extent, but at no one time has an entire district been deprived of its crop, as often occurs with some of our other cultivated crops.

Tomato Worm.—This is the large greenish worm, commonly called tobacco worm, which lives upon the foliage. If

the worms are present in large numbers and are not controlled, they will soon ruin the vines, as the amount consumed by each, daily, is enormous.

They can be controlled by the use of arsenical sprays, such as Paris green and arsenate of lead, or by hand-picking.

Cut Worms.—There are numerous species of these worms, which often destroy the plants by eating them off close to the ground just after transplantation. The worms are about one and one-half inches long, and vary in color from a greenish to a dull gray.

They may be controlled, to a certain extent, by having the ground plowed a couple of weeks before transplanting, and by scattering poisoned baits about the field in the evening, care being taken to keep all vegetation down in order to compel the worms to eat the poison. The baits are prepared by rolling up bunches of clover, grass or bran and wetting them with a solution of Paris green and water.

Potato Beetle.—The treatment for this insect is the same as that given above for the tomato worm.

Stalk Borer.—In some seasons this has proven quite destructive in certain localities. The borer enters the stalk and tunnels through it, causing the plant to suddenly wilt and die. Either the borer or the tunnel it has made can be readily found and the trouble ascertained. The remedies for this pest are successfully preventive, and consist in keeping all weeds and foreign plants from the field and in practicing a rotation of crops.

Point Rot.—This occurs at the blossom end of the green fruit. It gradually spreads until the fruit is entirely worthless. The disease seems to prefer dry weather and light soils. At present there are no successful means of controlling it under field conditions. Sub-irrigation is said to have proven a successful remedy on small areas.

Ripe Rot or Anthracnose.—While ripening, the fruit is often attacked by this disease, which causes it to decay rapidly. It is more prevalent in rainy seasons, in some instances destroying the fruit on entire fields in a few days. Preventive measures only can be made use

of, such as destroying the diseased fruits and planting far enough apart so that the light and air can enter to dry out the foliage.

Blight and Cause.—I find the cause to be in taking the plants from the beds. In doing this, the roots are injured, thus cutting off all means of nourishing the plant, which will soon wilt, the leaves curling upward. Again, blight may be caused by the using of new soil. Older soil, well fertilized, combined with care in transplanting, the roots having been protected, will greatly restrict the spreading of this blight.

Leaf Spot Diseases.—There are several fungi troubles which affect the leaves and stem with a varying degree of severity. These diseases are characterized by the appearance of small, irregular brown spots, which may spread until the leaf and plant are killed. The one which is doing the most damage is the leaf spot. This disease usually appears first upon the lower leaves and then spreads to the leaves above. All the leaves may finally be destroyed. If many of the latter are

destroyed, the fruit will not ripen properly, nor will the vines mature the usual number of tomatoes.

The first step is the destruction of the fungus. In many cases it is found in the soil of old beds. If this soil is to be used, use air-slaked lime for a top dressing before sowing the seed; mix this lime through the soil seeing that it is thoroughly incorporated. When the plants are ½" in height, spray them with Bordeaux Formula: 4 lbs. lime, 4 lbs. copper sulphate and 50 gals. water. Spray the plants once or twice a week, using but a light spray. This will give you a healthy plant. Fresh lime around your plant after it is set in the field is a good remedy for any disease.

I find a great many of the Tomato Growers lose their crops on account of excess moisture, the roots gathering more moisture than can be transpired through the leaves. This will cause the leaves to curl and the bloom to drop off. A remedy for this is to cultivate deeply and as close to the plant as possible without injuring the roots. Follow this process by using a

large single-shovel plow, not less than 20″ wide at the top and 10″ long. This will throw the soil around the plant, causing new roots to be put forth at once, thereby saving your crop to a great extent.

In the absence of the single-shovel plow, use a hoe and draw the soil around the plant. A field that is once affected with any fungus should not be set in tomatoes for several seasons. It is best to use fresh soil each year, destroying the old vines at the close of the season, to prevent the spreading of any disease that might be in the soil.

Growers' Clubs

In order to interest the coming farmers of today, I organized, this season, ten boys' clubs, the boys ranging in age from 12 to 15 years. These boys contracted to set out and tend one-half acre of tomatoes, using the Landreth Red Rock variety of seed. They were to receive the contract price for the tomatoes, and as an inducement I awarded gold watches to the boys having the greatest number of

tons to their one-half acre. The highest average received was seven and one-half tons to the one-half acre, which, considering the age of the boys, was exceptionally good.

Growers are at all times willing to exchange their plans of raising crops with other Growers. I find that the organizing of Growers' Clubs and the arranging for monthly meetings, where all points pertaining to tomato culture, as well as the raising of other crops, can be taken up, is to the advantage of the members. The new growers will become more interested in the work and better and more profitable results invariably obtained.

When Tomato Culture is better understood there will be no more certain or profitable crop that can be grown on the farm.

Grown by W. A. Van Camp, Indianapolis, Ind.

The Van Camp Extra Early

The seed for this tomato was sown under glass in a hot bed on March 15, 1910. It was transplanted twice, and each time was placed in a hot bed under glass. The plant was set in the open ground on the 17th of April and was protected from the cold by a covering or a box with a glass top. A liquid fertilizer was used twice, equal to 500 lbs. of Dust Fertilizer to the acre. The cultivation was done with a small hoe, the side of the hoe being used to scrape the top of the soil. In order to give the roots their own free growth, the ground was never loosened around the plant. On the 27th of July 23 ripe tomatoes were picked from the plant and tomatoes continue to be picked from it during the entire season. You can see several tomatoes still clinging to this vine, which was dug up the last week of October.

LANDRETHS' RED ROCK TOMATO

BIG PROFITS are assured by planting this celebrated sort

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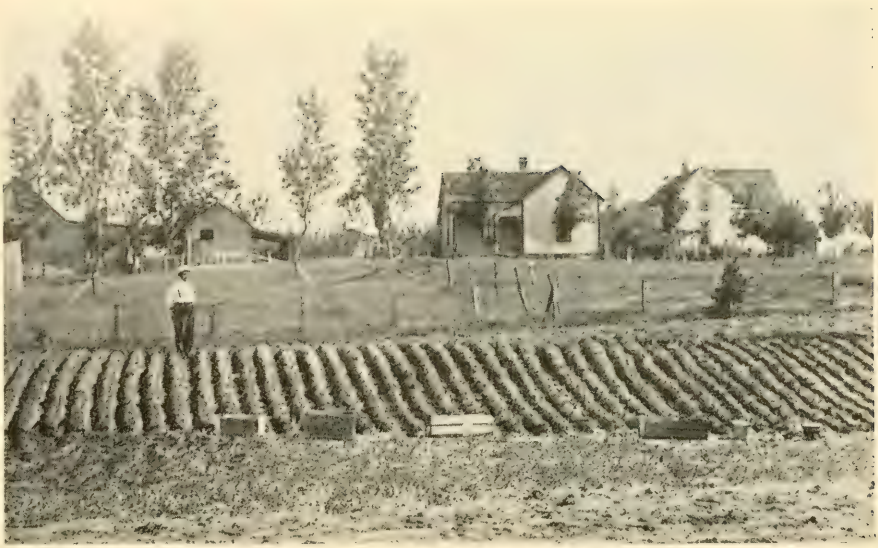


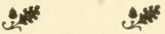
This Plant Bed was grown, using Commercial Fertilizer and was free from all disease

E. Rauh & Sons Fertilizer Co.

MANUFACTURERS OF

HIGH GRADE COMMERCIAL FERTILIZERS

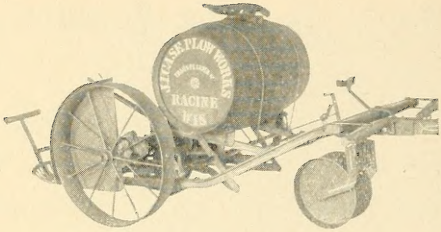
Union Stock Yards Indianapolis, Ind.



We desire to call your attention to our Special Tomato Fertilizer which is the best formula used for raising tomatoes. It has been tested out for a period of thirty years and always has given the very best of results. It is well balanced, and carries plant food elements in a highly available form.

We shall be pleased to have you call on us or correspond with us, knowing it will be to our mutual benefit.

E. Rauh & Sons Fertilizer Co.



One Great Advantage

That a Transplanter has over hand setting is that water can be used, cheaply and easily, to aid the plants in becoming established.

To make this feature effective, the WATER VALVE must work promptly and continously. This valve in the J. I. Case WILL work and work BETTER than any we know.

A Transplanter is a money-maker and a money-saver. It's good business to buy one.

See the nearest case agent or write directly to

J. I. CASE PLOW WORKS

Indianapolis, Indiana : - : Racine, Wisconsin